

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 384 AND SECOND AVE. /WAYNE AVE. IN MONTGOMERY COUNTY. THE SIGNAL IMPROVEMENTS INCLUDES NEW MAST ARMS, SIGNAL HEADS, SIGNS, AUTO-SCOPE DETECTION-NEW CONDUIT, NEW CABINET/CONTROLLER AND NEW INTERCONNECT WILL BE PROVIDED FOR MD 384 AT SECOND AVE./WAYNE AVE.

MD 384 RUNS IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FIVE PHASE, FULL TRAFFIC ACTUATED MODE. THE MD 384 APPROACHES WILL OPERATE CONCURRENTLY AND THE SECOND AVE./ WAYNE AVE. WILL OPERATE IN A SPLIT PHASE OPERATION.

EXCLUSIVE/ PREMISSIVE LEFT TURN PHASE WILL BE PROVIDE FOR EASTBOUND MD 384.

THE SIDE STREET WILL HAVE SOUTH TO WEST RIGHT TURN OVERLAP ALONG MD ROUTE 384.

A CONCURRENT PEDESTRIAN MOVEMENT WILL OPERATE ALONG THE EAST AND WEST LEGS OF THE INTERSECTION. AN ALTERNATE PEDSTRAIN MOVEMENT WILL OPERATE ALONG BOTH NORTH AND SOUTH LEGS OF THE INTERSECTION.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

CAT CODE	ITEM	QUANTITY	DESCRIPTION
222.1	SF		ALUMINUM SHEET SIGNS
2	EA		R3-2 (NO LEFT TURN) (30"x30") GROUND MOUNTED
4	EA		R10-11B (NO TURN ON RED) (24"x24") MAST ARM MOUNTED
4	EA		R4-7 (KEEP RIGHT) (24"x30") GROUND MOUNTED
1	EA		D-3(1) (← SECOND AVE) (VAR.X16") 1 EACH MAST ARM MOUNTED
1	EA		D-3(1) (← WAYNE AVE) (VAR.X16") 1 EACH MAST ARM MOUNTED
1	EA		D-3(1) (SECOND AVE→) (VAR.X16") 1 EACH MAST ARM MOUNTED
1	EA		D-3(1) (WAYNE AVE →) (VAR.X16") 1 EACH MAST ARM MOUNTED
2	EA		SHIELD ASSEMBLY (EAST, WEST MD 384, LEFT, RIGHT ARROWS) (30"x51") POLE MOUNTED
2	EA		SHIELD ASSEMBLY (EAST, WEST MD 384, LEFT, RIGHT ARROWS) (48"x75") POLE MOUNTED
2	EA		R10-4(1) (PED. SIGN) (9"x12") POLE MOUNTED
5	EA		D1-1 (BIKE ROUTE TO MONT. HILLS) (24"x30") POLE MOUNTED
1	EA		SHIELD ASSEMBLY (NORTH MD 97, LEFT ARROW) (30"x51") POLE MOUNTED
1	EA		R10-12 (LEFT TURN YIELD ON GREEN) (36"x42") MAST ARM MOUNTED
2	EA		D-3(1) (COLESVILLE RD) (VAR.X16") MAST ARM MOUNTED
1	EA		CABINET W/ TELEMETRY MONT. CO. (SYSTEM CAB), SIZE 6

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CAT CODE	ITEM	QUANTITY	DESCRIPTION
1001	EA	1	MAINTENANCE OF TRAFFIC
2002	CY	4	TEST PIT EXCAVATION
8059	CY	6	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8011	EA	62	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8003	EA	5	VIDEO CABLE TO CONTROLLER (500FT.)
8051	LF	75	FURNISH AND INSTALL 3 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
8052	LF	45	FURNISH AND INSTALL 4 INCH SCH 80 RIGID PVC CONDUIT - TRENCHED
8085	LF	750	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)
8086	LF	1000	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8087	LF	2200	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8062	LF	75	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
8077	SF	160.1	INSTALL OVERHEAD SIGN
8022	EA	2	FURNISH AND INSTALL MAST ARM POLE AND 50 FOOT MAST ARM
8023	EA	1	FURNISH AND INSTALL MAST ARM POLE AND 60 FOOT MAST ARM
8047	EA	5	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCHES BELOW GRADE
8048	LS	1	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
8088	LF	500	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG) TYPE "TC"
8076	SF	50	INSTALL GROUND MOUNTED SIGN
8000	LF	150	REMOVE AND RESET BRICK PAVERS IN SIDEWALK
8060	LF	65	FURNISH & INSTALL WOOD SIGN SUPPORTS 4 INCH x 4 INCH
8049	EA	5	VIDEO DETECTION CAMERA
8050	EA	1	VIDEO INTERFACE EQUIPMENT
8025	EA	1	FURNISH AND INSTALL MAST ARM POLE AND 70 FOOT MAST ARM
8032	EA	4	INSTALL PUSHBUTTON AND SIGN
8095	EA	1	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8078	LF	2500	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE JELLYFILLED UNDERGROUND
8073	LF	75	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR WIRE NO 8 AWG THHN/THWN (LIGHTING)
8072	LF	75	FURNISH AND INSTALL ELECTRICAL CABLE - 1 CONDUCTOR WIRE NO 4 AWG THHN/THWN (TRAFFIC SIGNAL)
8014	EA	2	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCCELL
8000	EA	2	FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
8045	EA	4	PAINT STRUCTURE (BRONZE)
8000	LF	70	PULL BACK EXISTING CABLE/WIRE
8000	EA	1	DELIVERY OF REMOVED CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT 3 ARE AS FOLLOWS:

MR. BOB GONZALES,
CHIEF, TRAFFIC ENGINEER MONTGOMERY COUNTY
PHONE: 240-777-8761

MR. AUGUSTINE REBISH
DISTRICT UTILITY ENGINEER
PHONE: 301-513-7350

MR. MAJID SHAKIB
ASSISTANCE DISTRICT ENGINEER-TRAFFIC
PHONE: 301-513-7358

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATION DIVISION
PHONE: 410-787-7630

MR. RALEIGH MEDLEY
ASSISTANT DISTRICT ENGINEER-MAINTENANCE
PHONE: 301-513-7304

MR. ROBERT SNYDER
ASST. CHIEF, TRAFFIC OPERATION DIVISION
PHONE: 410-787-7631

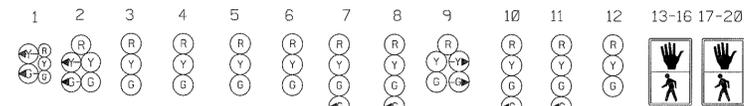
MR. ED RODENHIZER
CHIEF, SIGNAL OPERATION SECTION
PHONE: 410-787-7652

EQUIPMENT LIST CONT.

C. EXISTING EQUIPMENT REMOVED BY THE CONTRACTOR, AND DELIVERED TO 1283 - SEVEN LOCKES ROAD BUILDING "C", ROCKVILLE, MARYLAND 20854

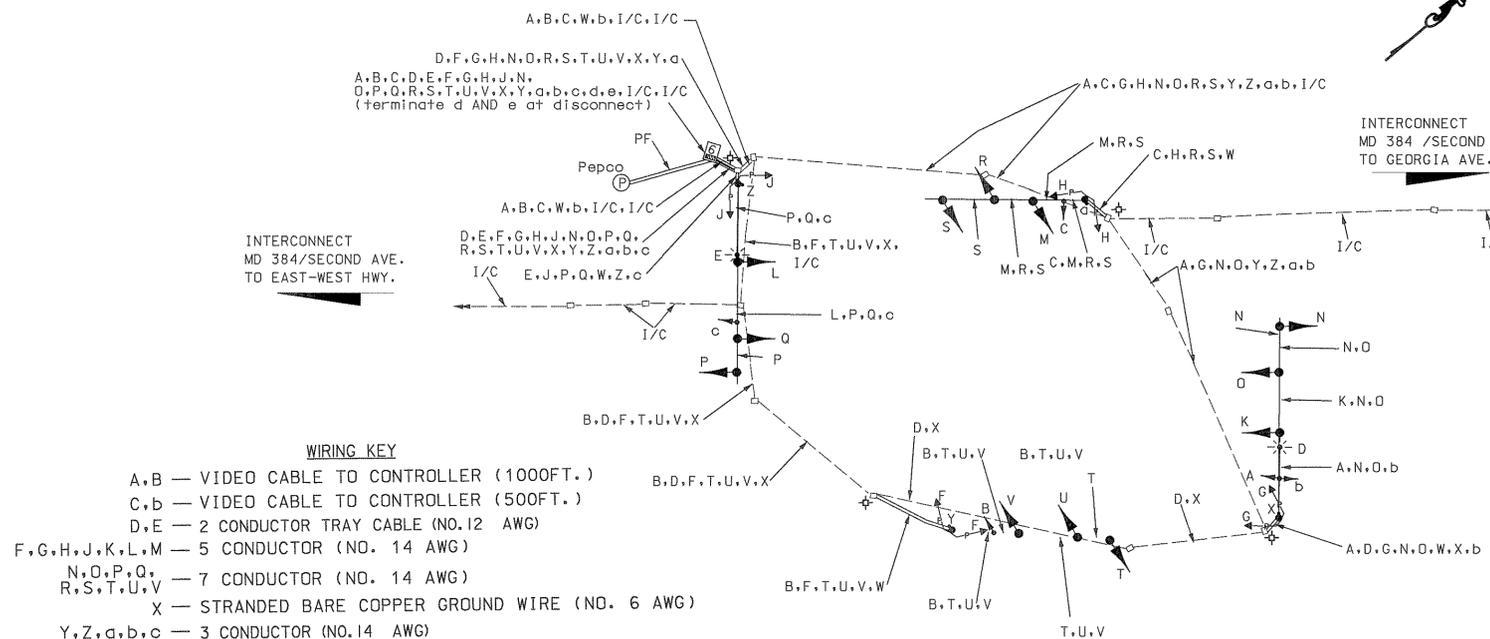
1 EA CONTROLLER AND CABINET - BASE MOUNT

PHASE CHART



Phase	1	2	3	4	5	6	7	8	9	10	11	12	13-16	17-20	Symbol	
Phase 1 & 6	G	G	G	R	R	R	R	R	-G	R	R	R	DW	DW	↕	
1 & 6 change	G	G	Y	R	R	R	R	R	-Y	R	R	R	DW	DW	↕	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	↔	
2 & 6 change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	↔	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	○	
PED Clearance	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	○	
2 & 6 change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	○	
Phase 3	R	R	R	R	R	R	G	G	G	R	R	R	R	WK	WK	○
3 change	R	R	R	R	R	R	Y	Y	Y	R	R	R	FL/DW	FL/DW	○	
Phase 3	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	○	
PED Clearance	R	R	R	R	R	R	G	G	G	R	R	R	DW	DW	○	
3 change	R	R	R	R	R	R	Y	Y	Y	R	R	R	DW	DW	○	
Phase 4	R	R	R	R	R	R	R	R	R	R	R	R	WK	WK	○	
4 change	R	R	R	R	R	R	R	R	R	G	G	G	FL/DW	FL/DW	○	
Phase 4	R	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	○	
PED Clearance	R	R	R	R	R	R	R	R	R	G	G	G	DW	DW	○	
4 change	R	R	R	R	R	R	R	R	R	G	G	G	DW	DW	○	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	↕	

WIRING DIAGRAM



WIRING KEY

- A, B — VIDEO CABLE TO CONTROLLER (1000FT.)
- C, b — VIDEO CABLE TO CONTROLLER (500FT.)
- D, E — 2 CONDUCTOR TRAY CABLE (NO. 12 AWG)
- F, G, H, J, K, L, M — 5 CONDUCTOR (NO. 14 AWG)
- N, O, P, Q, R, S, T, U, V — 7 CONDUCTOR (NO. 14 AWG)
- X — STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
- Y, Z, a, b, c — 3 CONDUCTOR (NO. 14 AWG)
- PF — PROPOSED UNDERGROUND FEED-BY PEPCO
- EL — EXISTING LOOP WIRE
- ⊕ — EXISTING GROUND ROD
- I/C — PROPOSED INTERCONNECT CABLE (12-PAIR JELLY FILLED)
- d — 3 WIRE (NO.: 4 AWG) FOR TRAFFIC SIGNAL ELECTRICAL SERVICE
- e — 3 WIRE (NO.: 8 AWG) FOR LIGHTING ELECTRICAL SERVICE

SG-2

BAI BRUDIS & ASSOCIATES, INC.
CONSULTING ENGINEERS

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(410) 884-3607

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNAL PLAN
**MD 384 (COLESVILLE ROAD)
AND SECOND AVE/WAYNE AVE.**

DRAWN BY: M.A.M.	F.A.P. NO. 2092B	TS NO. 2092B	SHEET NO. 2 OF 2
CHECKED BY:	S.H.A. NO. M0619/AS/AB54	COUNTY: MONTGOMERY	T.I.M.S. NO. E763
SCALE:	LOG MILE: 15038400.37	DATE: SEPT. 2001	